

CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE  
ON DISARMAMENT

ENDC/PV.312  
11 July 1967  
ENGLISH

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FINAL VERBATIM RECORD OF THE THREE HUNDRED AND TWELFTH MEETING

held at the Palais des Nations, Geneva,  
on Tuesday, 11 July 1967, at 10.30 a.m.

Chairman:

Mr. A. ZELLEKE

(Ethiopia)

THE UNIVERSITY  
OF MICHIGAN

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PRESENT AT THE TABLE

Brazil:

Mr. A.F. AZEREDO da SILVEIRA  
Mr. C.A. de SOUZA e SILVA  
Mr. A. da COSTA GUIMARAES  
Mr. S. de QUEIROZ DUARTE

Bulgaria:

Mr. K. CHRISTOV  
Mr. B. KONSTANTINOV  
Mr. T. DAMIANOV

Burma:

U KYAW MIN

Canada:

Mr. E.L.M. BURNS  
Mr. C.J. MARSHALL  
Mr. J.R. MORDEN

Czechoslovakia:

Mr. P. WINKLER  
Mr. V. VAJNAR

Ethiopia:

Mr. A. ZELLEKE  
Mr. B. ASSFAW

India:

Mr. K.P. JAIN

Italy:

Mr. G.P. TOZZOLI  
Mr. E. FRANCO

Mexico:

Mr. J. CASTANEDA  
Miss E. AGUIRRE

Nigeria:

Mr. B.O. TONWE

Poland:

Mr. J. GOLDBLAT  
Mr. E. STANIEWSKI

Romania:

Mr. N. ECOBESCO  
Mr. O. IONESCO  
Mr. A. COROIANU  
Mr. M. BUHOARA

Sweden:

Mr. A. EDELSTAM  
Mr. R. BOMAN  
Mr. U. ERICSSON

Union of Soviet Socialist  
Republics:

Mr. A.A. ROSHCHIN  
Mr. V.P. SUSLOV  
Mr. V.V. SHUSTOV

United Arab Republic:

Mr. H. KHALLAF  
Mr. A. OSMAN

United Kingdom:

The Rt. Hon. F. MULLEY  
Sir Harold BEELEY  
Mr. R.J. O'NEILL  
Mr. R.I.T. CROMARTIE

United States of America:

Mr. W.C. FOSTER  
Mr. G. BUNN  
Mr. C.G. BREAM  
Mr. C. GLEYSTEEN

Special Representative of the  
Secretary-General:

Mr. D. PROTITCH

Deputy Special Representative  
of the Secretary-General:

Mr. W. EPSTEIN

1. The CHAIRMAN (Ethiopia): I declare open the three hundred and twelfth plenary meeting of the Conference of the Eighteen-Nation Committee on Disarmament.
2. Mr. FOSTER (United States): The United States Government is convinced that the forces of science and technology should be applied as earnestly to the task of controlling and eliminating nuclear weapons as they have been to creating them. For this reason, in particular, we welcome the important statement made by the representative of Sweden at our 309th meeting setting forth the Swedish scientific analysis concerning verification of a comprehensive test ban.
3. Mrs. Myrdal was correct in anticipating that the results of the Swedish study may seem optimistic. They do seem so to us. However, optimism is a spirit indispensable to us here in this Committee -- it sustains our search for realistic and practical solutions to the problems we must face.
4. My Government is giving careful attention to Mrs. Myrdal's report. In my statement today I shall have some of the answers Mrs. Myrdal requested. We shall also have several questions of our own, asking for further information which the United States Government needs for its study of some of the points the Swedish representative has raised.
5. Most importantly, Mrs. Myrdal asked whether the Governments of nuclear-weapon Powers represented here are "really ready to stop nuclear weapon testing, or, if they are not ready to do so, whether it is for reasons of national security or for other reasons." (ENDC/PV.309, para. 26) This is indeed an important question and Mrs. Myrdal has asked for a frank answer. I should therefore like to state clearly that the United States does continue to desire, and does continue to seek, an adequately-verified comprehensive test-ban treaty.
6. Mrs. Myrdal's question seems to suggest that verification of a comprehensive test ban is no longer a difficult problem because of advances in seismology and that therefore, if countries permit verification to stand in the way, it must be because they do not want a test ban. In fact, Mrs. Myrdal concludes that "the control issue can no longer be used as a convenient reason for holding up an agreement in this field." (ibid., para. 25)

(Mr. Foster, United States)

7. The verification analysis presented by Mrs. Myrdal, however, needs considerable clarification. I am convinced that the questions we have to ask about this analysis will make evident that the verification issue remains a complex one, and that one set of computations alone cannot suffice to resolve the political and practical problems.

8. First of all, however, I should like to discuss the relationship between national security and arms control measures in general.

9. The appeal of arms control measures must rest on whether they enhance the security of the nations agreeing to them. In our deliberations on the non-proliferation treaty, for example, I have made clear my Government's conviction that no nation should be asked to sign this treaty if it does not promote its national security within the world community as well as meet the world-wide concern over the growing threat of nuclear war. We believe that the non-proliferation treaty which we envisage will serve this purpose for its parties. We seek no more than this in a comprehensive test ban -- that is, that it serve the security interests of those States agreeing to it.

10. Thus, in my Government's view, national security considerations are not an obstacle to agreement on a comprehensive test-ban treaty but must rather be the foundation of agreement. To be consonant with security, a comprehensive test-ban treaty must afford a means for verifying that each party is fulfilling its obligations. That is to say, one of two parties cannot be expected to cease an activity in which both are engaged and which is an important factor in their strategic relationship unless it is convinced that the other party also is ending that activity.

11. We are ready today, as in the past, to negotiate an effective treaty. Moreover, we have made clear that it is modern science which will determine our position on the verification procedures needed to establish that such a treaty is being fully observed. This is not merely rhetoric. We are matching our words with a programme of scientific research and development which I believe is internationally unprecedented and unequalled. In particular, we are devoting scientific manpower and materials to research aimed at improving techniques for seismic detection and

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identification. We are endeavouring to gain new insights into possible procedures for identifying a greater number of seismic events of lower magnitude by instruments alone, thus minimizing the number of inspections needed for verifying a comprehensive test ban. In addition, the United States Government's work in this field has also contributed to important research and analysis by other nations interested in solving the verification problem, as Mrs. Myrdal indicated in the statement to which I have been referring.

12. Mrs. Myrdal also expressed concern that the need to develop the technology of peaceful nuclear explosive devices might be adduced as a new argument against a comprehensive test ban. I can assure the Committee that we have no intention of doing this. At our meeting of 21 March I proposed a series of principles for dealing with the problem of sharing any potential benefits of peaceful nuclear explosions (ENDC/PV.295, paras. 72 et seq.). One of those principles was that there should be full consultation among nuclear and non-nuclear parties to the limited test-ban Treaty about any amendments of that treaty required in order to carry out feasible projects. My Government believes that this principle should be applied to the same effect in the case of an extension of the treaty to cover underground tests and to the establishment thereunder of agreed procedures for nuclear explosions for peaceful purposes.

13. As I indicated at the outset of my remarks, I am in a position today to respond to only some of the questions raised by the Swedish representative at our 309th meeting. Our study of Mrs. Myrdal's important statement on that occasion is continuing and would benefit from the further information which the representative of Sweden indicated may be forthcoming about the probability methods the Swedish scientists employed in their investigation of verification systems. From a preliminary examination of Mrs. Myrdal's report we judge that there are a number of technical points that will need to be clarified and elaborated before we can confidently evaluate it.

14. Mrs. Myrdal stated (ENDC/PV.309, para. 20) that the Swedish scientists proceeded from the assumption of two political requirements for a convincing control system. The first of these is that it should provide sufficient deterrence against violations by making the probability of detection sufficiently high. We agree that this is an important consideration. The second assumed requirement Mrs. Myrdal referred to was

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that the control system contain adequate assurance against the risk that earthquakes might be mistaken for explosions and induce unwarranted political accusations

15. Later in her statement the Swedish representative cited verification methods which she said would provide sufficient deterrence in that earthquakes would be mistaken for explosions only once in fifteen or more years (ibid., para. 22). This, too, is an important requirement. A comprehensive test ban, to be stable, should prevent situations giving rise to unwarranted suspicions which might lead to a breakdown of the agreement. Since we last made a detailed presentation on the subject a little more than a year ago (ENDC/PV.254), we have continued to make improvements in our instrumentation and analytical techniques for the seismic detection and identification of underground events. Since then, in addition to improving our ability to determine the depth at which the seismic event occurs, we have developed instruments and analytical methods for increasing our capability to differentiate between earthquakes and underground explosions by observation of the long-period surface waves.

16. However, despite these improvements, the exploitation of which is still going forward, there still occur each year in many countries which have the potential for nuclear testing natural seismic events that are indistinguishable from explosions. No data that we have or have ever seen presented support anything like the small number of only one earthquake being mistaken for an explosion every fifteen years which was referred to by Mrs. Myrdal. Only by supplementing seismic methods with on-site inspections can we hope to reduce the number of unidentified events to such a level. We should therefore be particularly interested in studying the data on which Mrs. Myrdal's statement is based.

17. This problem, however, should not be confused with another -- in fact reverse -- problem which is more vital to the national security of the parties. That reverse problem is the question of how likely it is that an underground nuclear explosion will be indistinguishable from an earthquake, and thus pass unnoticed. We should be interested to know how this was considered by the Swedish scientists in reaching their conclusions about the sufficiency of deterrence afforded by particular verification methods. Obviously, if a verification system affords a potential violator sufficient probability that his nuclear explosion will be mistaken abroad for an earthquake -- and thus pass unnoticed -- that system must remain unacceptable.

(Mr. Fraser, United States)

18. In another section of her statement, the Swedish representative reports the scientific investigators' conclusion that with the so-called complexity method of identification from long distances sufficient deterrence should be attainable with only one inspection in two years (ENDC/PV.309, para. 21). While this method has applicability to the identification of the larger events, we do not know the basis for concluding that it would reduce the need for inspection to such a low level.

19. We understand that the Swedish scientists assumed in their investigations that on-site inspections would be 50 per cent effective. Now, in estimating the effectiveness of such inspections one must evaluate first the ability to locate an unidentified seismic event. Secondly, one must know or hypothesize the particular inspection methods authorized by a test ban providing for on-site inspection. The procedures prescribed by the parties for assuring themselves of the nature of an unidentified event will, of course, be most important to those who wish to be confident that the exercise of the right of inspection will in fact provide a meaningful opportunity to verify compliance with the treaty. In this connexion we should appreciate Mrs. Myrdal's providing this Committee with further information about the significance of the recent developments in fact-finding machinery to which she referred (ibid., para. 17).

20. Mrs. Myrdal stated also that the Swedish scientists' estimates were made on the assumption of 200 detected shallow earthquakes per year in any politically-interesting area that would have to be scrutinized for identification purposes (ibid., para. 24). In this connexion we should like to know whether and how the Swedish scientists have taken into consideration the magnitude of the seismic events being considered. This is important because militarily-significant underground tests can be of yields generating low-magnitude seismic signals, and we know that all discrimination criteria become less effective at lower magnitudes because of interfering effects of seismic noise. We should be interested to know, therefore, whether any variation of the discrimination capabilities of the verification system with the magnitude of the seismic event has been considered.

21. Mrs. Myrdal commented that the results of the Swedish study may have to be adjusted when more extensive observational data are made available. In this connexion she called upon the United States Government to add to its earlier contributions a description of our latest scientific investigations (ibid.).

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22. Mrs. Myrdal requested information on any experiments to follow up the Longshot experiment on which we have reported to this Committee (ENDC/182). Last autumn we conducted a series of high-explosive tests in the Kuriles, the results of which will be published very shortly. Further experiments of this type will be conducted near the site of the Longshot experiment this summer. This programme is aimed at reducing biases in the location of seismic events in these highly-seismic island chains.

While we are still continuing our analyses in this area we should be glad, as we have in the past, to make our information available to this Committee.

23. To assist in evaluating inherent technical problems associated with verification the United States would certainly be receptive to any Swedish or other proposals that would serve to enlarge international understanding in these problem areas. In this connexion it must be emphasized that these problems cannot be solved by the United States alone. They also require the co-operation of other nations. My Government is convinced, however, that a solution can be found provided there is patience, determination and good will. These are the sentiments with which the United States looks forward to carrying out this task.

24. If I may take another moment, I should like to refer to the fact that one of the charter members of our Committee, General Burns of Canada, has just been signally honoured by his country. He has been named a Companion of the Order of Canada, which is the highest honour the Canadian Government can bestow on one of its citizens. General Burns is one of only thirty-five persons to be so honoured. I am sure that all the members of this Committee will join me in congratulating the General on this new and further recognition of his services as a soldier, a peace-keeper and a disarmer.

25. Mr. BURNS (Canada): I should like just to acknowledge with gratitude the very kind words that have been spoken by the representative of the United States, and also to thank again all the many members of delegations who have congratulated me individually. I feel that membership of this Committee has been one of the most satisfactory elements of the service I have rendered to the Government of Canada, and that this recognition has something to do with my having been made a member of this very important body. Again I thank all those who have been kind enough to congratulate me.

26. The CHAIRMAN (Ethiopia): Before I read the communiqué may I, on behalf of the Ethiopian delegation and, I am sure, of many other delegations, congratulate General Burns on his appointment to the highest Order of his country?

The Conference decided to issue the following communiqué:

"The Conference of the Eighteen-Nation Committee on Disarmament today held its 312th plenary meeting in the Palais des Nations, Geneva, under the chairmanship of Mr. A. Zellicko, representative of Ethiopia.

"Statements were made by the representatives of the United States and Canada.

"The next meeting of the Conference will be held on Thursday, 13 July 1967, at 10.30 a.m."

The meeting rose at 11.10 a.m.